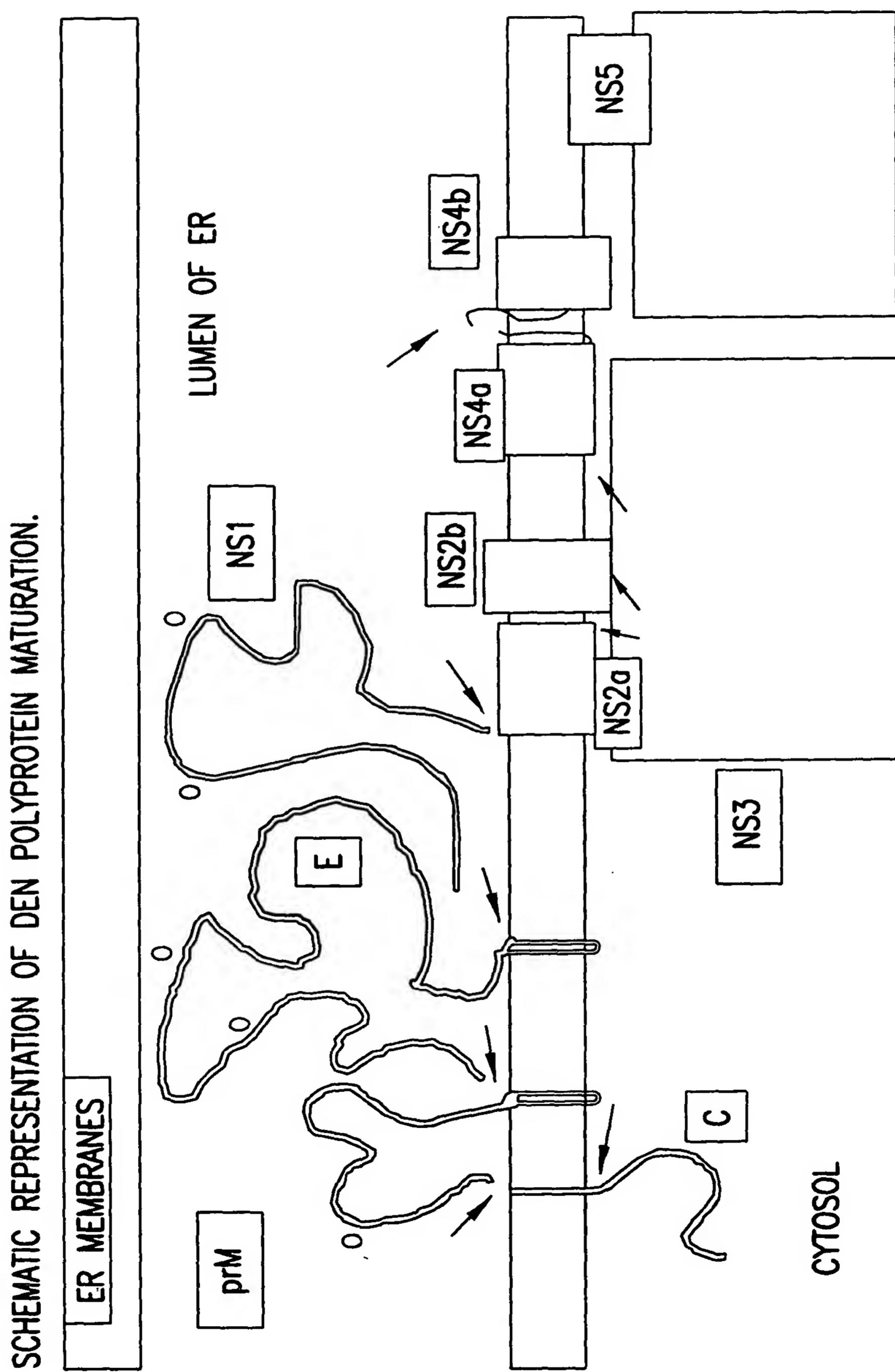


FIG. 1A



SCHEMATIC REPRESENTATION OF RECOMBINANT prM AND E PROTEINS

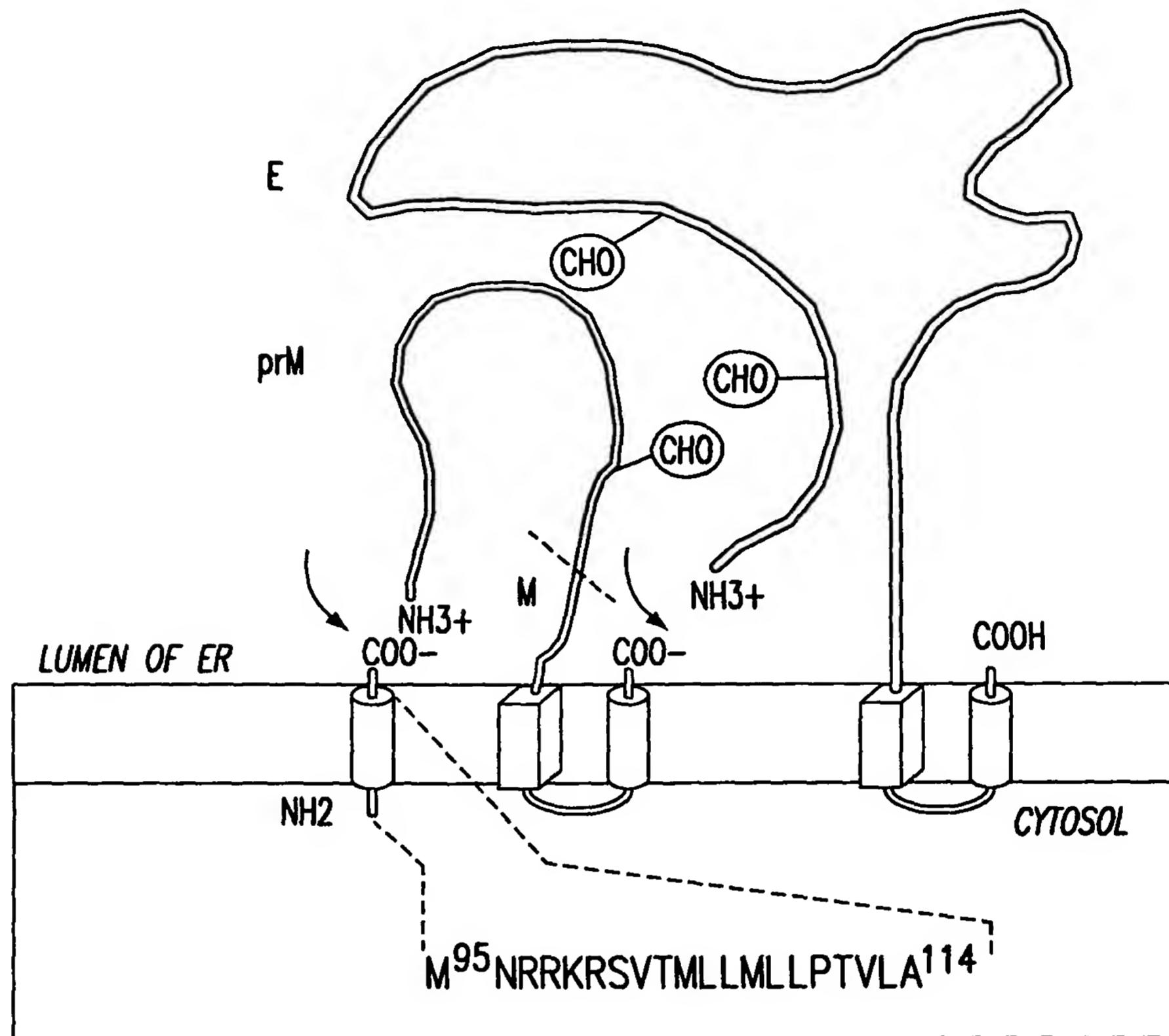


FIG.1B

SCHEMATIC DIAGRAM OF DEN VIRUS PROTEIN E MONOMER

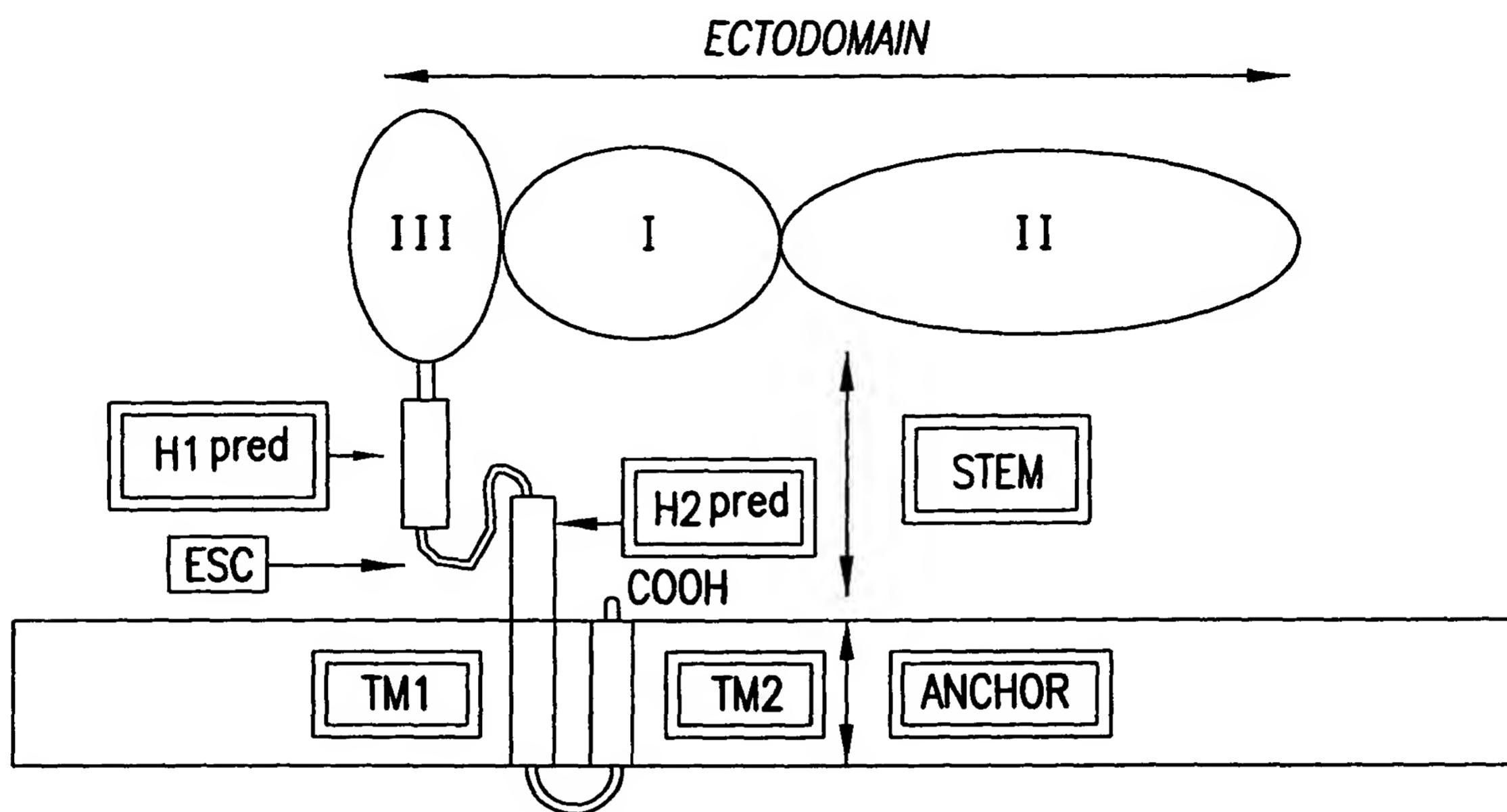
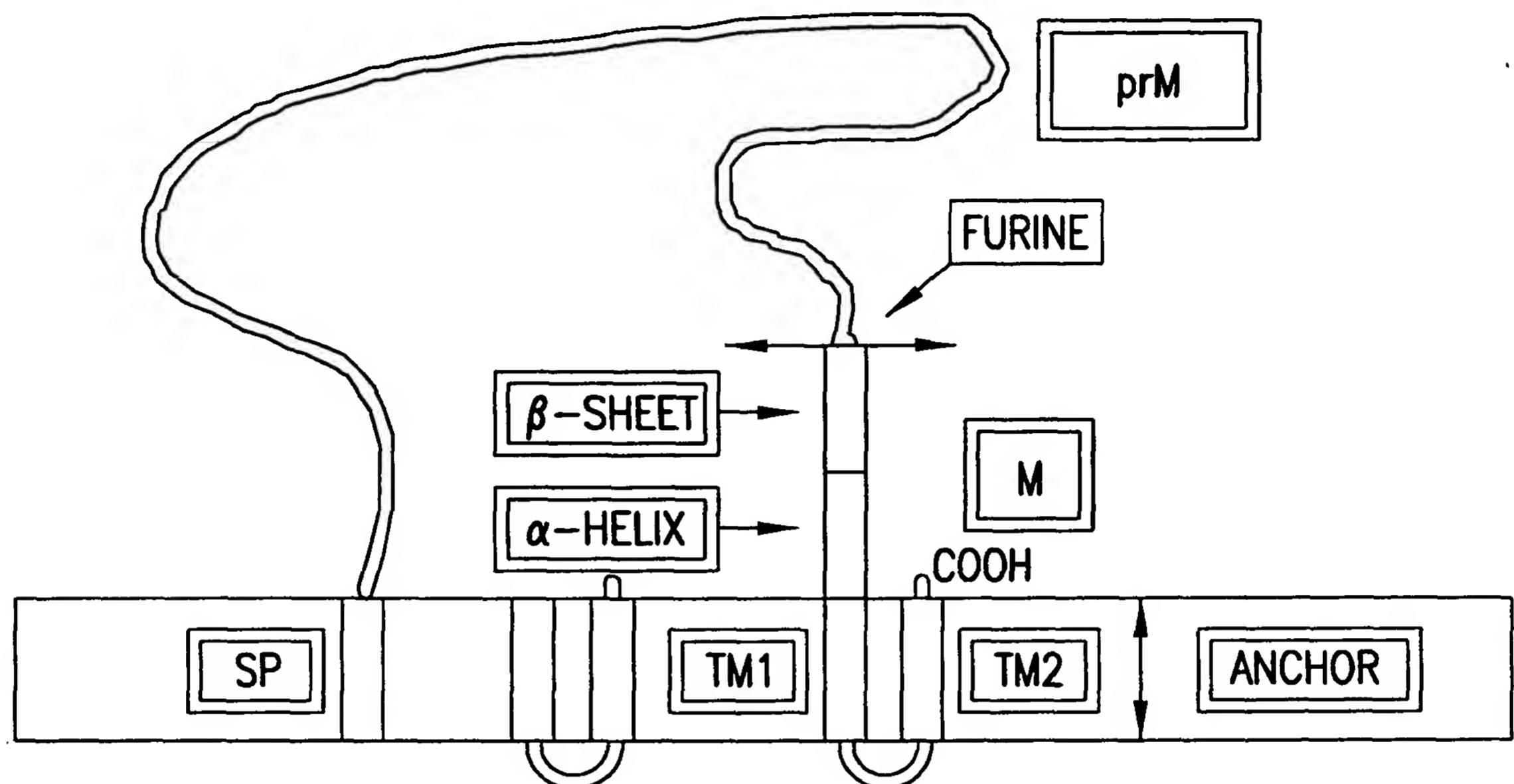


FIG.2A

SCHEMATIC DIAGRAM OF DEN VIRUS PROTEIN prM/M



SCHEMATIC REPRESENTATION OF THE prM PROTEIN STRUCTURE

FIG.2B

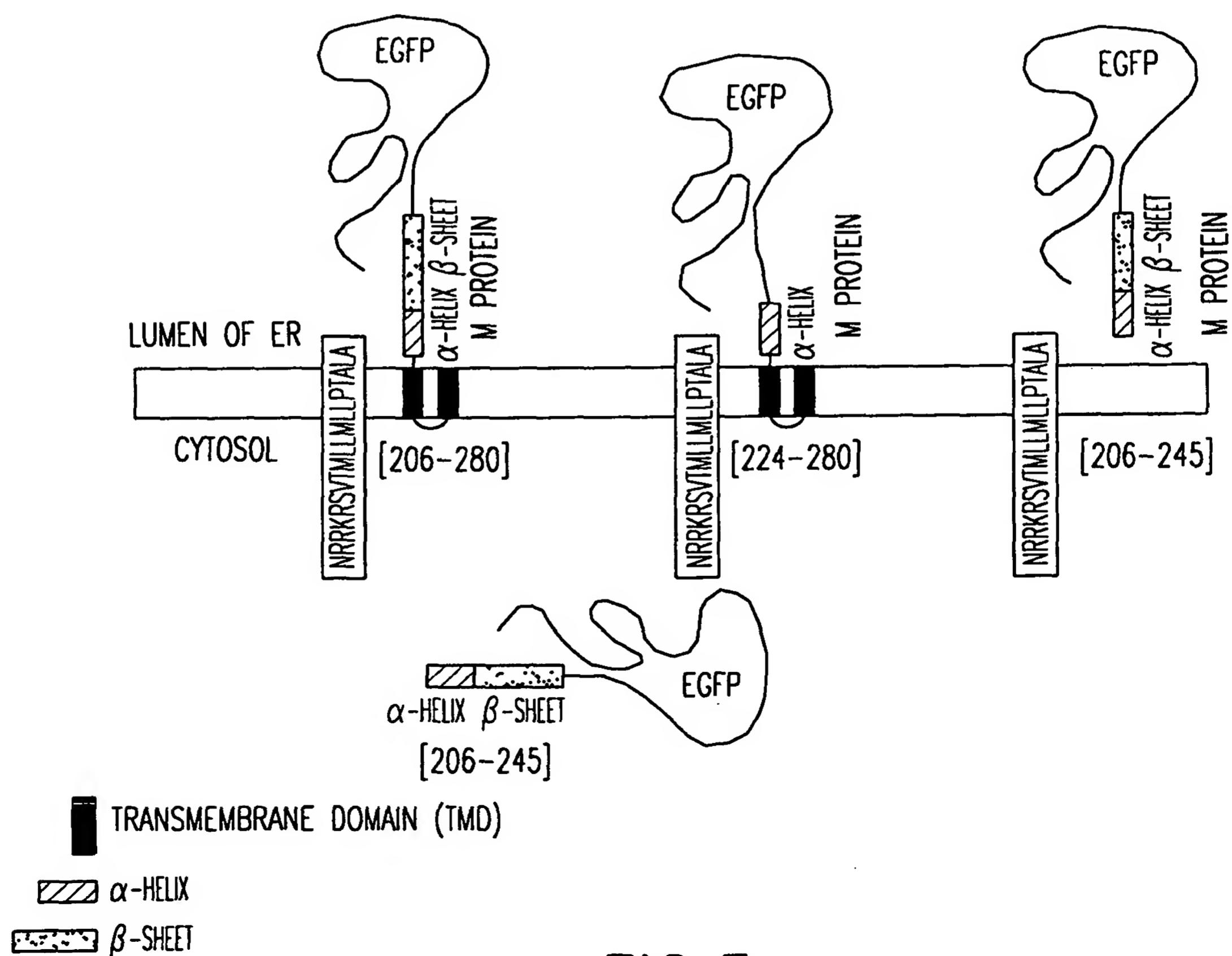
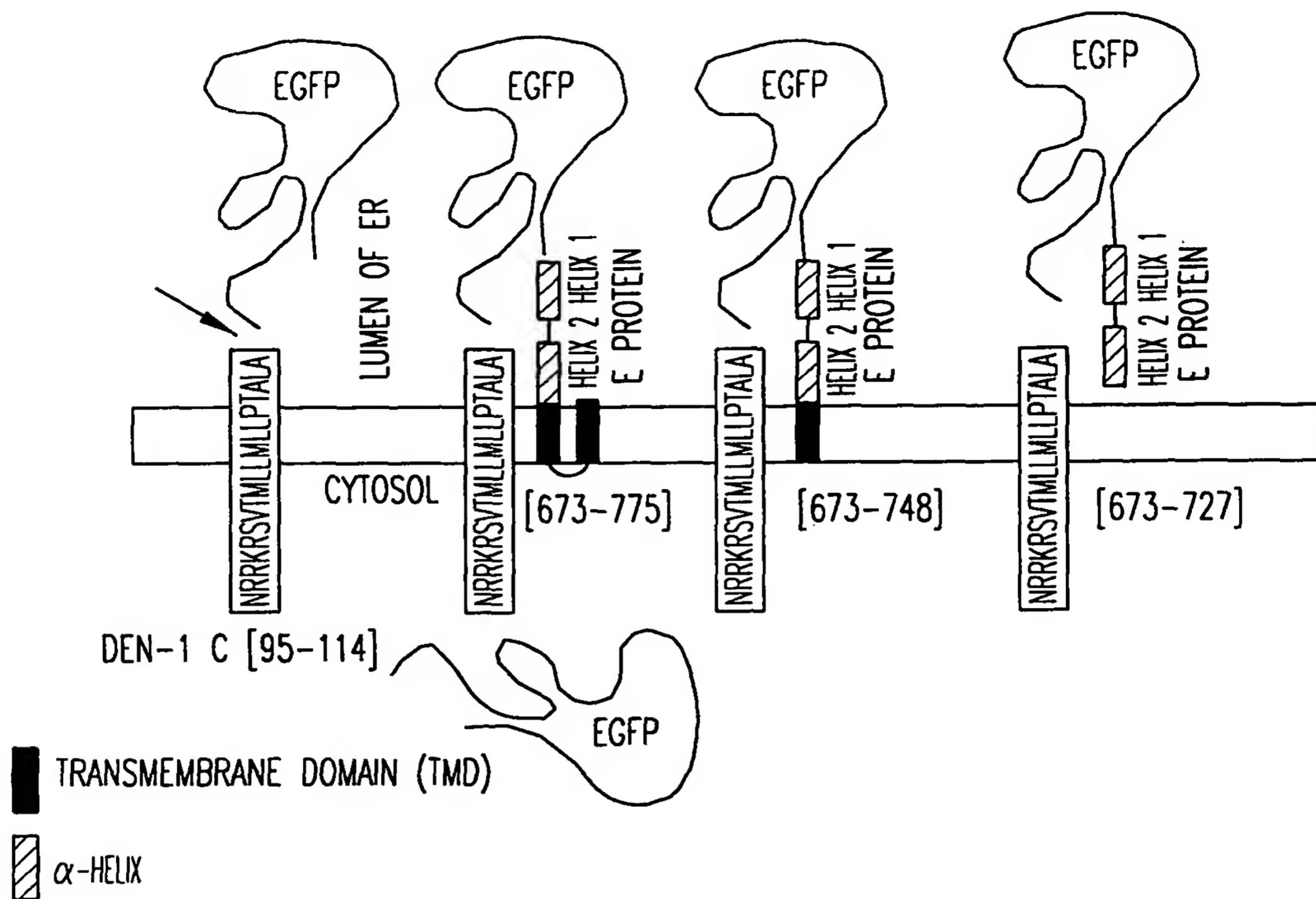


FIG.3

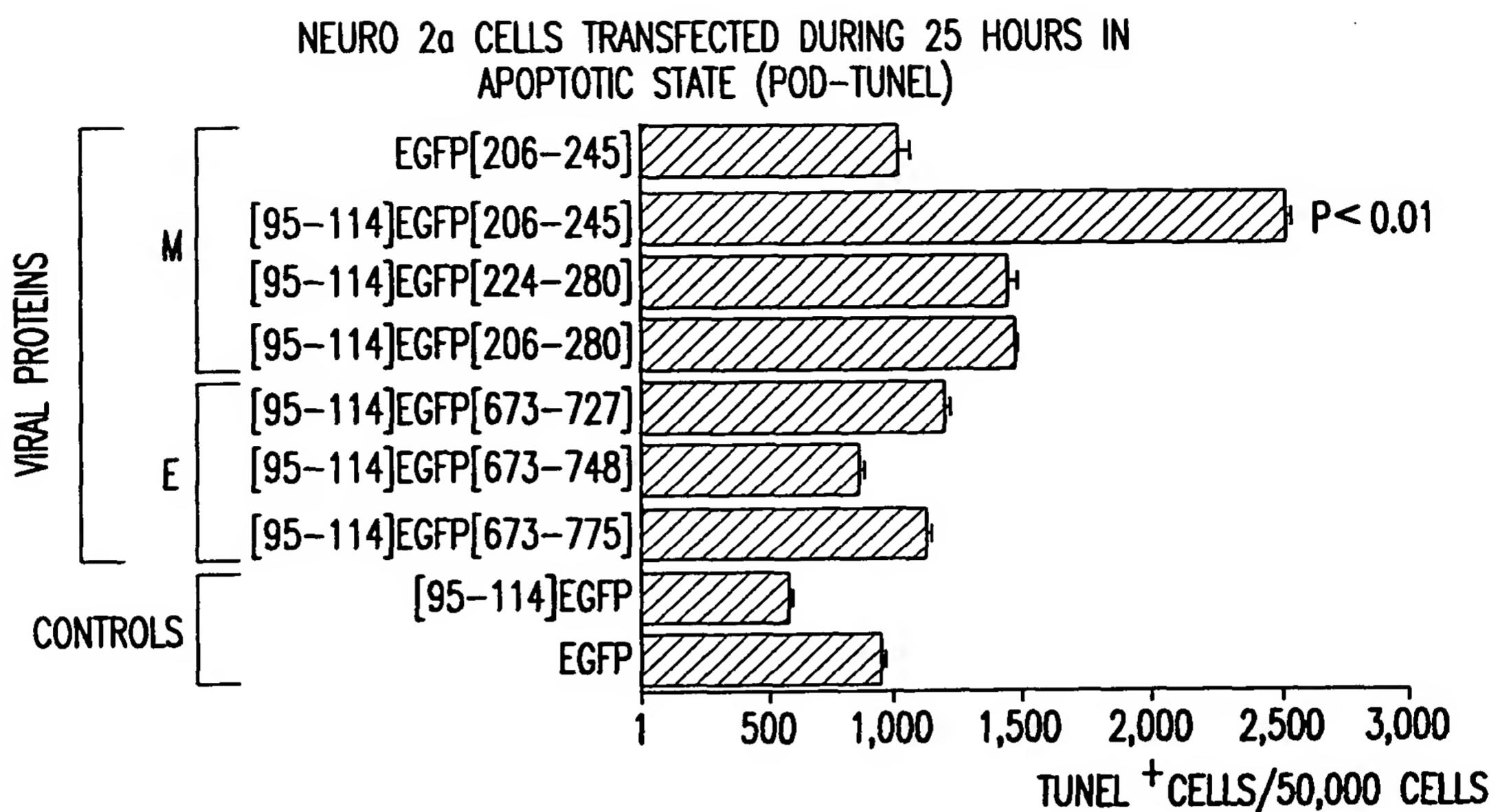


FIG.4A

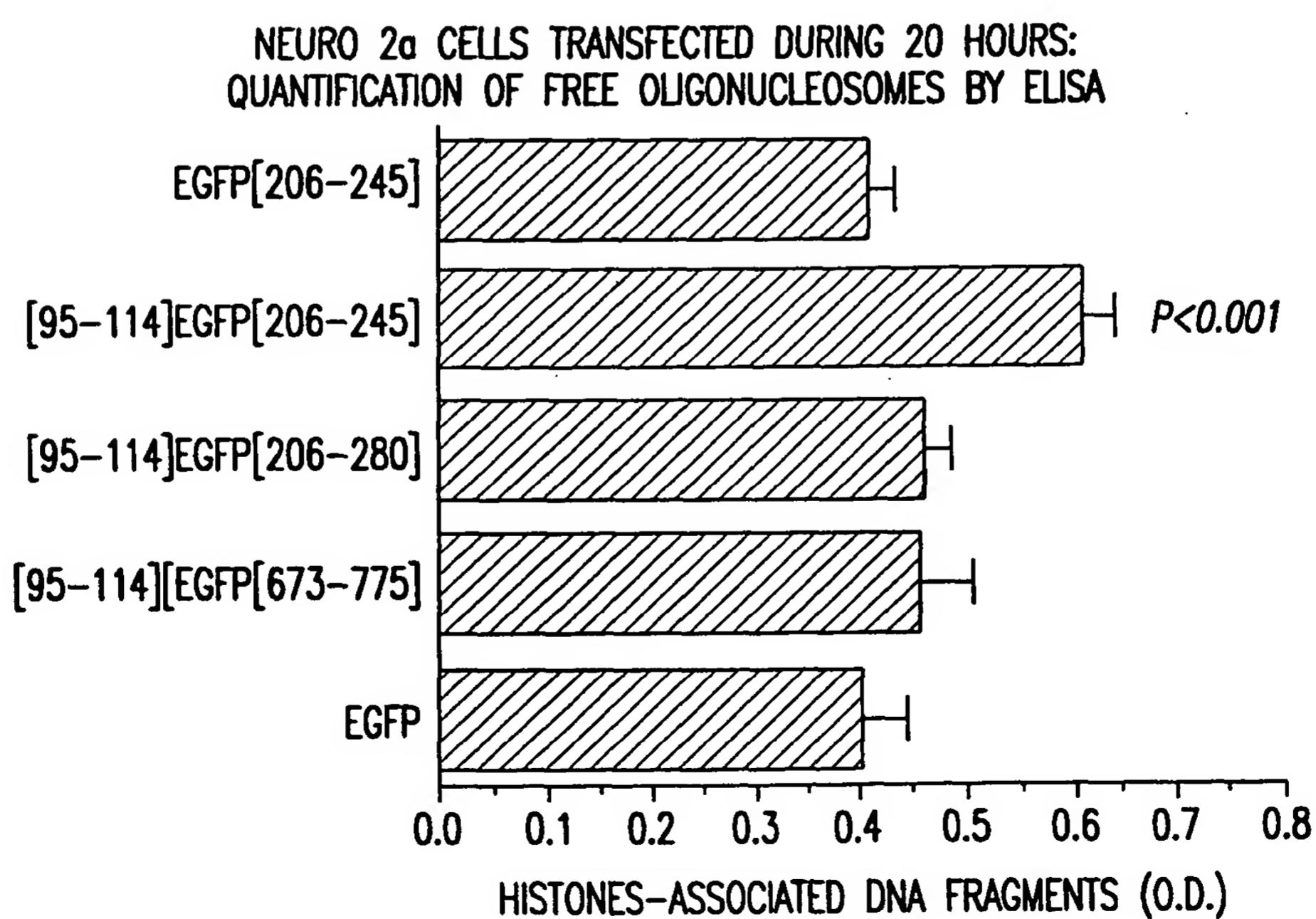


FIG.4B

NEURO 2a CELLS EXPRESSING THE [95-114]EGFP[206-245] FUSION PROTEIN
IN APOPTOTIC STATE (POD-TUNEL)

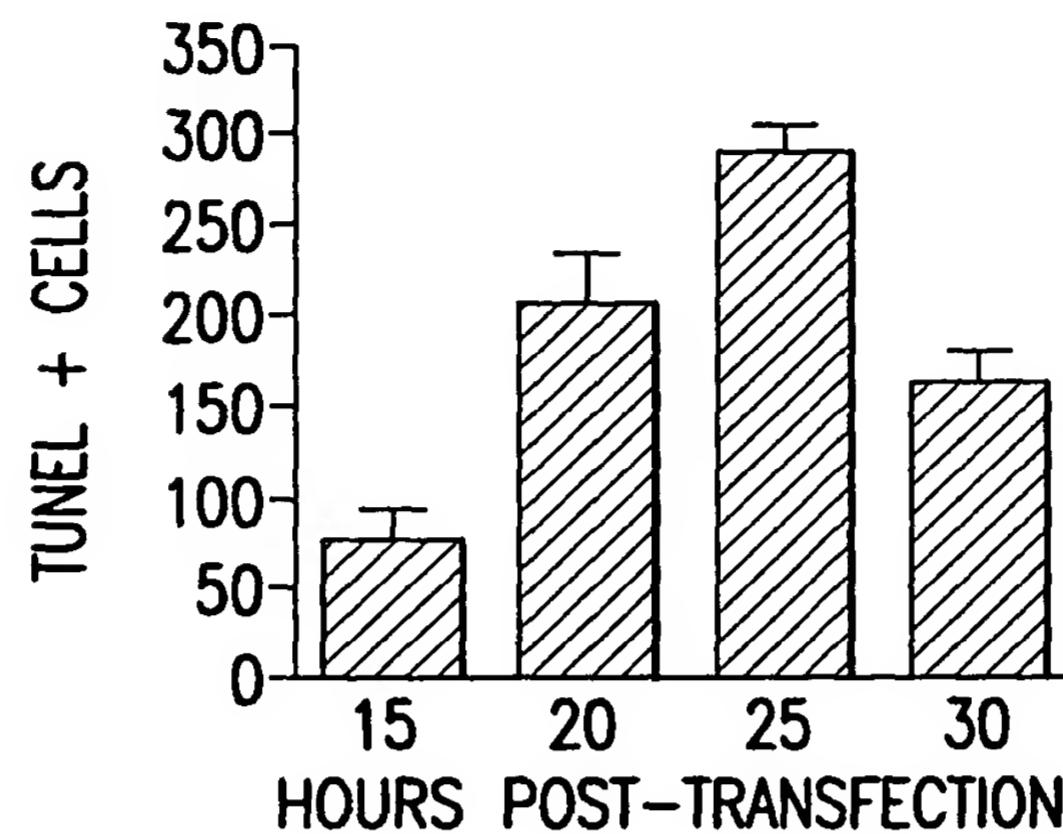


FIG.4C

HepG2 CELLS TRANSFECTED DURING 20 HOURS:
QUANTIFICATION OF FREE OLIGONUCLEOSOMES BY ELISA

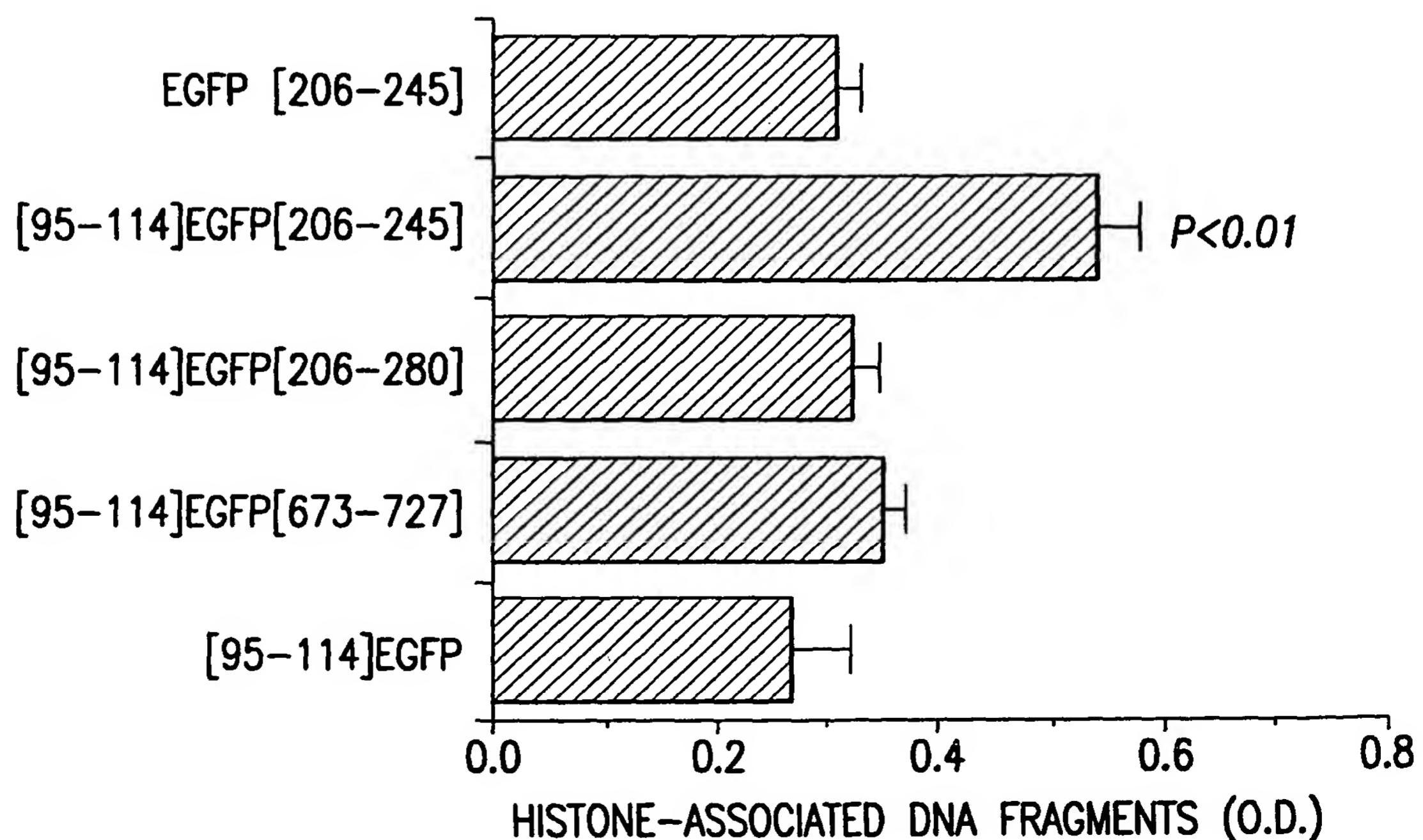


FIG.5A

FIG. 4D

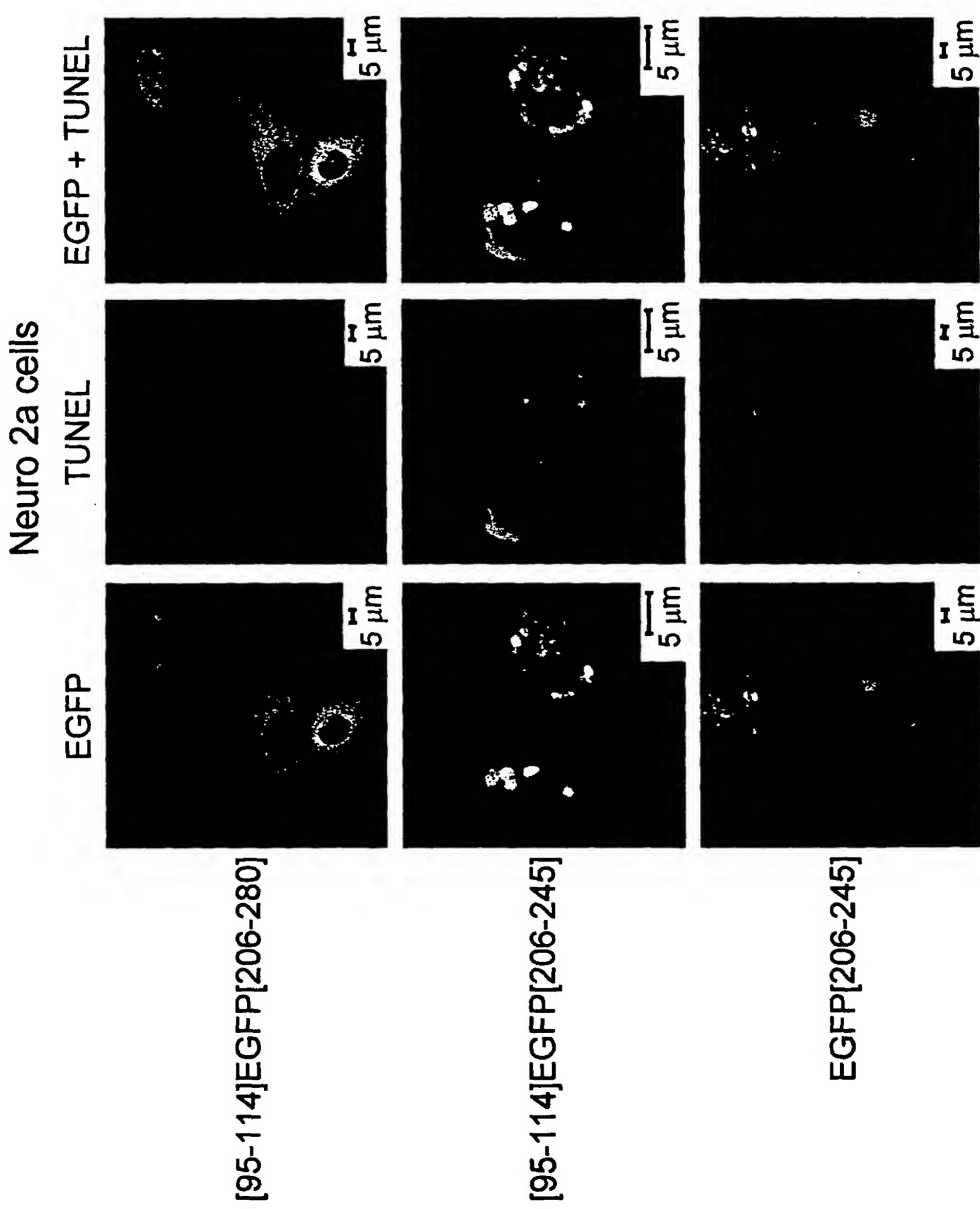
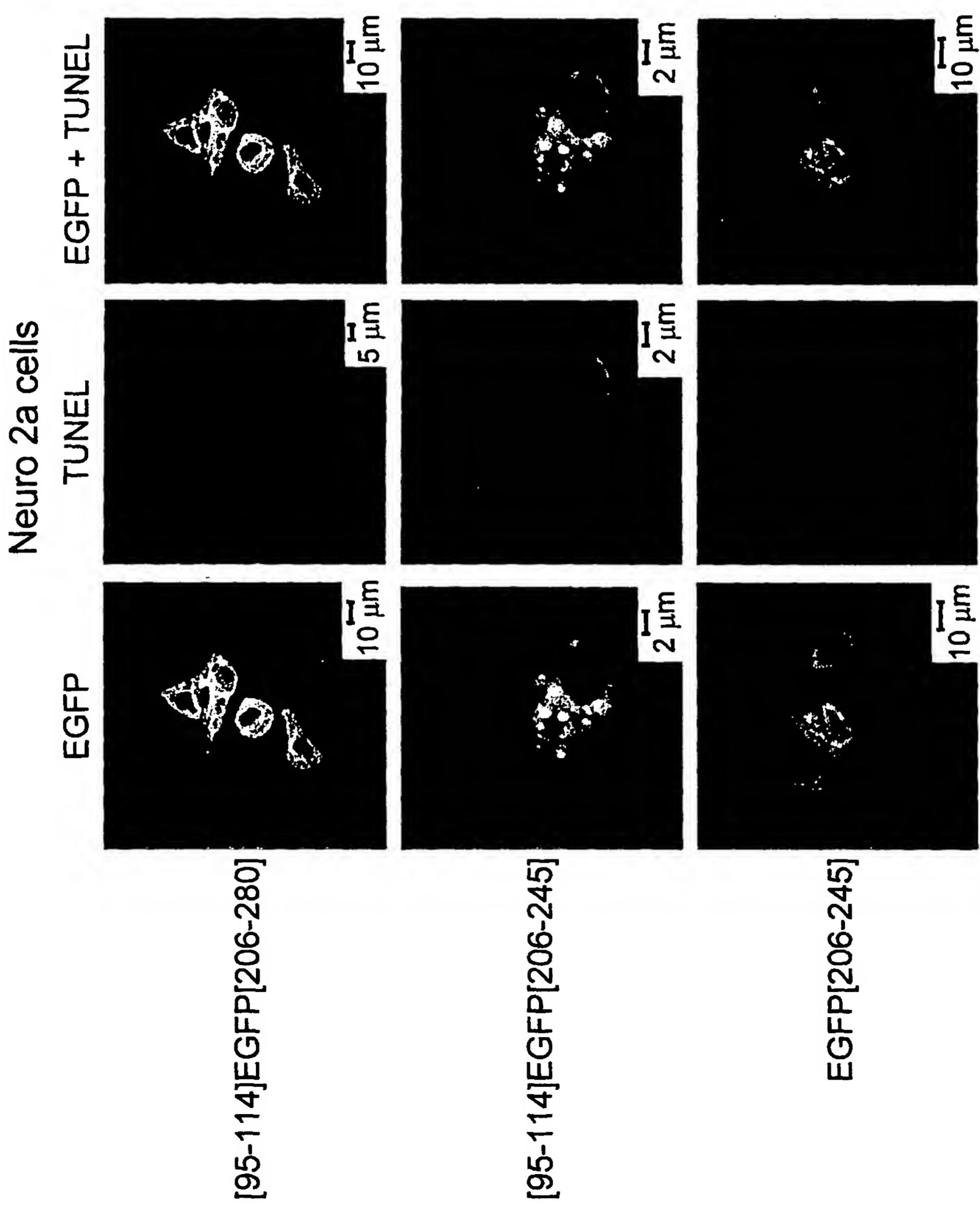


FIG. 5B



Sequence of the plasmide p[95-144]EGFP [206-245]

Sequence in the 5' of the gene EGFP of the plasmide pEGFP-N1 (Clontech, #6085-1, Gene bank accession #U55762)

591	601	611	621	631	641	651	661	671
•	•	•	•	•	•	•	•	•
5' G CTA CGG CTA CGC GAC TCA GAT CTC GAG CTC AAG CTT CGA ATT CTG CAG TCC ACC TCG AGC GTC CCC CGG CGC CGG GAT CCA CCC GTC GCC ACC ATG								
<i>Nhe I</i>								

Sequence of the virus Den-1 strain BR/90 in the 5' of the gene of 1'EGFP sequence DEN-1

M	N	R	R	K	R	S	V	T	M	L	L	M	L	L	P	T	A	L	A	R	E	P	P	V	A	T	M
5' G CTC GCA ATG AAC AGC AGG AAA AGA TCC GTG ACC ATG CTC CTC ATG CTC CTC CCC ACA GCC CTC GTC CCC CGG GAT CCA CCC GTC GCC ACC ATG																											<i>Sma I</i>
<i>Nhe I</i>																											

Sequence in the 3' of the gene EGFP of the plasmide pEGFP-N1

1380	1390	1400	1410								
L	A	M	•	E	E	L	•	Y	N ochre	•	•
5' CTC CGC ATG GAC GAG CTC TAC AAC TAA AGC GGC CCC ACT CTA											
<i>BsrG I</i>											<i>Not I</i>

Sequence of the virus DEN-1 strain FG/89 on the 3' of the gene of 1'EGFP

P	H	V	G	L	C	L E T T E T W M S S E G A W K Q I Q K V E T W																				
1380	1390																									
L	A	M	•	E	E	L	•	Y	S	S	V	A	L	A	!	A	L	R	H	P	opal					
5' CTC CGC ATG GAC GAG CTC TAC AGT TCC GTG GCT CTG GCC.....GCT TTG AGA CAC CCA TGA TTGGGGGGGGACTC																									<i>BsrG I</i>	<i>Not I</i>

FIG.6

Sequence of the plasmide p[95-114][211-245]

Sequence in the 5' of the gene EGFP of the plasmide Pegfp-N1 (Clontech, #6085-1, Gene bank accession #u55762)

591	601	611	621	631	641	651	661	671	EGFP
	•		•		•		•	•	
5' C <u>CTA CGG CTC GAC TCA GAC CCG GAC CTC GAG CTC GAT CTC GAT CTC GAG CTC AAG CTT CGA ATT CTG CAG TCG ACC GTC CGG CCC CGG GAT CCA CGG ACC ATG 3'</u>									
<i>Nhe I</i>									

Sequence in the 3' of the gene EGFP of the plasmide pEGFP-N1

1380	1390	1400	1410	
L	A	M	E	L
			•Y	N ochre
5' CTC GGC ATG GAC GAG CTC TAC AAG TAA AGC CGC CGC ACT CTA 3'				
<i>BsrG I</i>				
<i>Not I</i>				

Sequence of the virus DEN-1 of the plasmide p[95-114][211-245]

sequence [95-114]

591	M	N	R	R	K	R	S	V	T	M	L	L	M	L	L	P	T	A	L	A
	•																			
5' G CTA GCA ATG AAC AGC AGG AAA AGA TCC GTG ACC ATG CTC CTC ATG CTC CTC CCC ACA GCC CTG GCC																				
<i>Nhe I</i>																				

sequence [211-245]

-P	H	V	G	L	G	[L E T R T E T W M S S E G A W K Q I Q K] N E T W A L R H P
[217-245]						

	opal	TGA	TTGGCGGCCGACTC	3'
<i>Not I</i>				

FIG.7

Cells expressing the [95-114][211-245] fusion protein

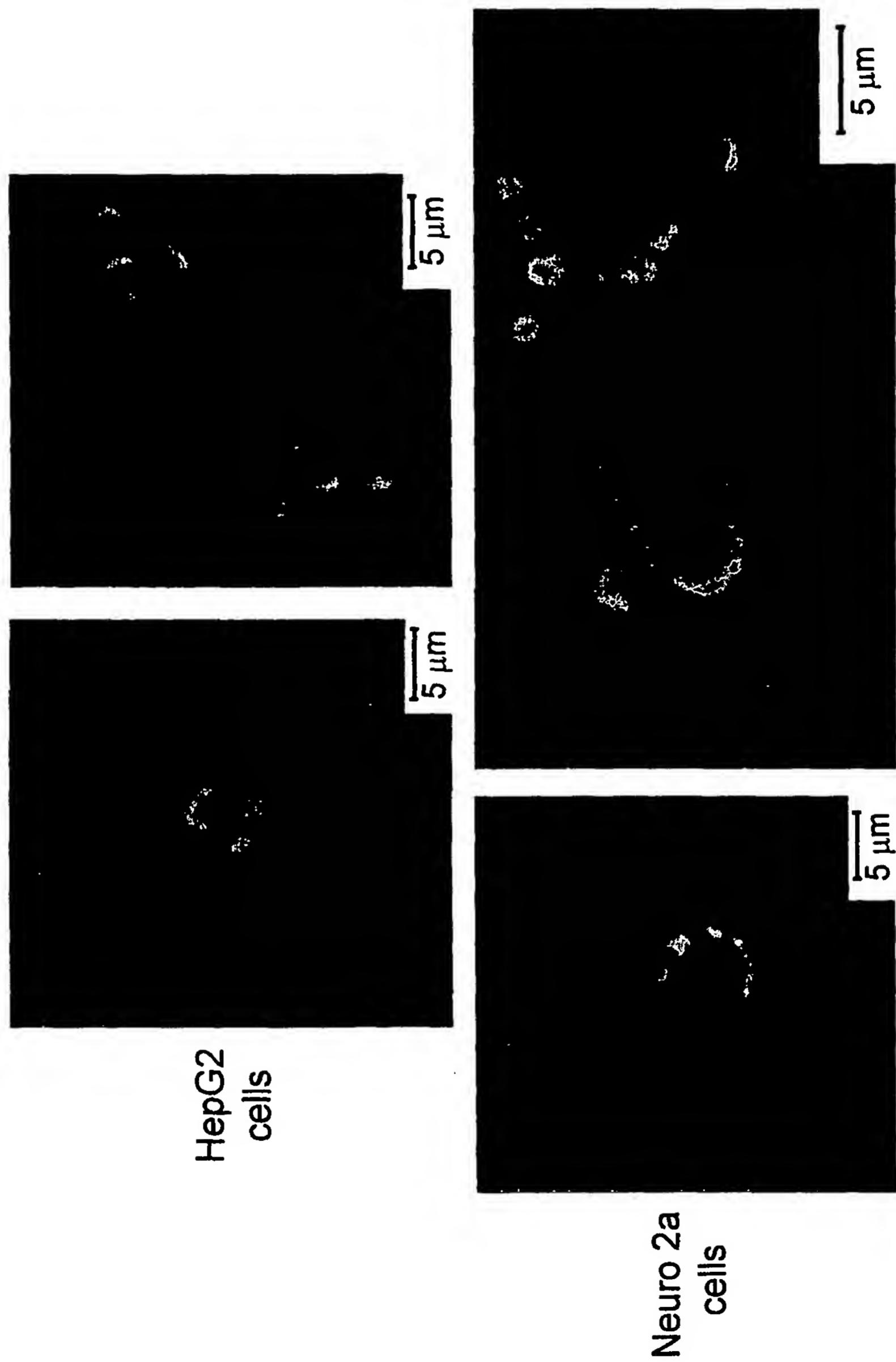


FIG.8

SIMILARITY AND IDENTITY BETWEEN DEN VIRUS AND WN VIRUS

M (West-Nile virus strain IS-98 ST1)
215 RSLTVQTHGESTLANKKGAWMDSTKATRYLVKTESWILRNP
SVALAPHVGLGLETRTETWMSSEGAWKQIQKVETWALRHP
206 245
M (DEN-1 virus strain FGA/89)
32% identity, 66% similarity

Protein M sequences of strains NY99-flamingo382-99 (Genpept access : AF196835 1) and HNY1999 (Genpept access : AF202541 1) and isolate 2741 (Genpeptnew access : AF206518 1) of West-Nile virus are identical to that of WN strain IS-98 ST1.

FIG.9

Similarity and Identity

Sequence of the protein M of the virus DEN-1/CD72
M (virus DEN-1, strain FGA/89)

S V A L A P H V G L G L E T R T E T W M S - S E G A W K Q I Q K V E T W A L R H
S P A L A D K A G V G S E Q P T A T W S S V K S S A L R Q I P R C P T V C L Q N
CD72 (aa 56-95) 40% identity

Swiss Prot Library under Accession NosP21855

Peptide 217-242 of the protein M of the virus DEN-1/Bax
L E T R T E T W M S S E G A W K Q I Q K DEN-1
L R E R L L G W I Q D Q G G W D G L L S BH2 (Bax)
identity 25%, similarity 70%

GenBank Data Library under Accession NosQ 07812

Sequence 217-242 of the protein M from Flavivirus

L E T R T E T W M S S E G A W K Q I Q K	DEN-1
L E T R T E T W M S S E G A W K H A Q R	DEN-2
L D T R T Q T W M S A E G A W R Q V E K	DEN-3
L E T R A E T W M S S E G A W K H A Q R	DEN-4
L S N K K G A W M D S T K A T R Y L V K	KUN
L V N K K E A W L D S T K A T R Y L M K	JE
L V N K K D A W L D S T K A T R Y L T K	MVE
L A N K K G A W M D S T K A T R Y L V K	WN
L A T K N T P W L D T V K T T K Y L T K	SLE
L K T R Q E K W M T G R M G E R Q L Q K	YF
L T G R G H K W L E G D S L R T H L T R	TBE
L T G R G H Q W L E G E A V K A H L T R	LANGAT
M V G T G H A W L K G D N I R D H V T R	POW

DEN-1	GenBank Data Library under Accession Nos	AF 226687
DEN-2	GenBank Data Library under Accession Nos	M 20558
DEN-3	GenBank Data Library under Accession Nos	M 93130
DEN-4	GenBank Data Library under Accession Nos	M 14931
KUN	GenBank Data Library under Accession Nos	D 00246
JE	GenBank Data Library under Accession Nos	U 14163
MVE	GenBank Data Library under Accession Nos	GNWVMV
WN	GenBank Data Library under Accession Nos	AF 196835
SLE	GenBank Data Library under Accession Nos	AF M16614
YF	GenBank Data Library under Accession Nos	K 02747
TBE	GenBank Data Library under Accession Nos	X 07755
LANGAT	GenBank Data Library under Accession Nos	M 73805 et M86650
POW	GenBank Data Library under Accession Nos	L 06436

FIG.10

Sequence of the plasmide p[95-114]EGFP [206-245]DEN-2

Sequence in the 5' of the gene EGFP of the plasmide pEGFP-N1 (Clontech, #6085-1, Gene bank accession #U55762)

5' G CTA CCC CTA CCC GAC TCA GAT CTC GAC CTC AAG CTT CGA ATT CTG CAG TCC ACC GAT CTC CCC CCC GAT CCA CCC GTC GCG GAT *Nhe I* *Sma I*

Sequence of the virus DEN-1 strain BR/90 in the 5' of the gene of 1'EGFP

sequence DEN-1

5' G CTA GCA ATG AAC AGC AGG AAA AGA TCC GTG ACC ATG CTC CTC ATG CTG CCC GAT CCA CCC GTC GAT CCC GGC ACC ATG
Nhe I _____
Sma I

Sequence in the 3' of the gene EGFP of the plasmide pEGFP-N1

1380 1390 1400 1410
 L A M • E E L • Y N ochre • •
 5' CTC GGC ATG GAC GAG CTG TAC AAG TAA AGC GGC GGC ACT CT
BsrGI Not I

Sequence of the virus DEN-2 strain JAM in the 3' of the gene of 1'EGFP

P H V G M G L E T R T E T W M S S E G A W K I I V Q R I E T W
 1380 1390
 L A M • E E L Y R S V A L V I I I L R H P opal
 5' CTC GGC ATG GAC GAG CTG TAC AGA TCA GTG GCA CTC GTT ATC TTG AGA CAT CCA TGA GCGG
BsrGI

FIG. 1

CCCCGACTC Not I

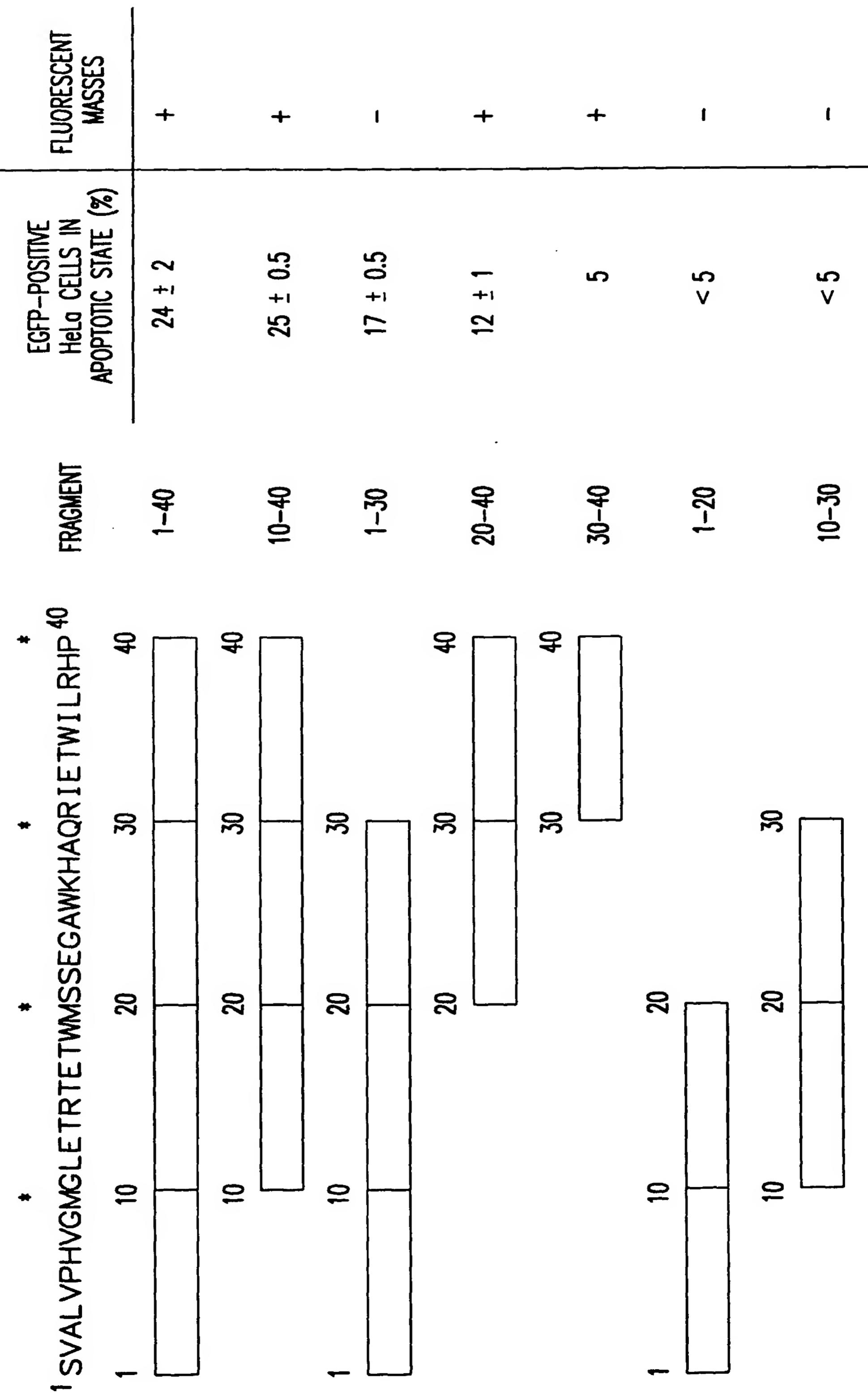


FIG. 12

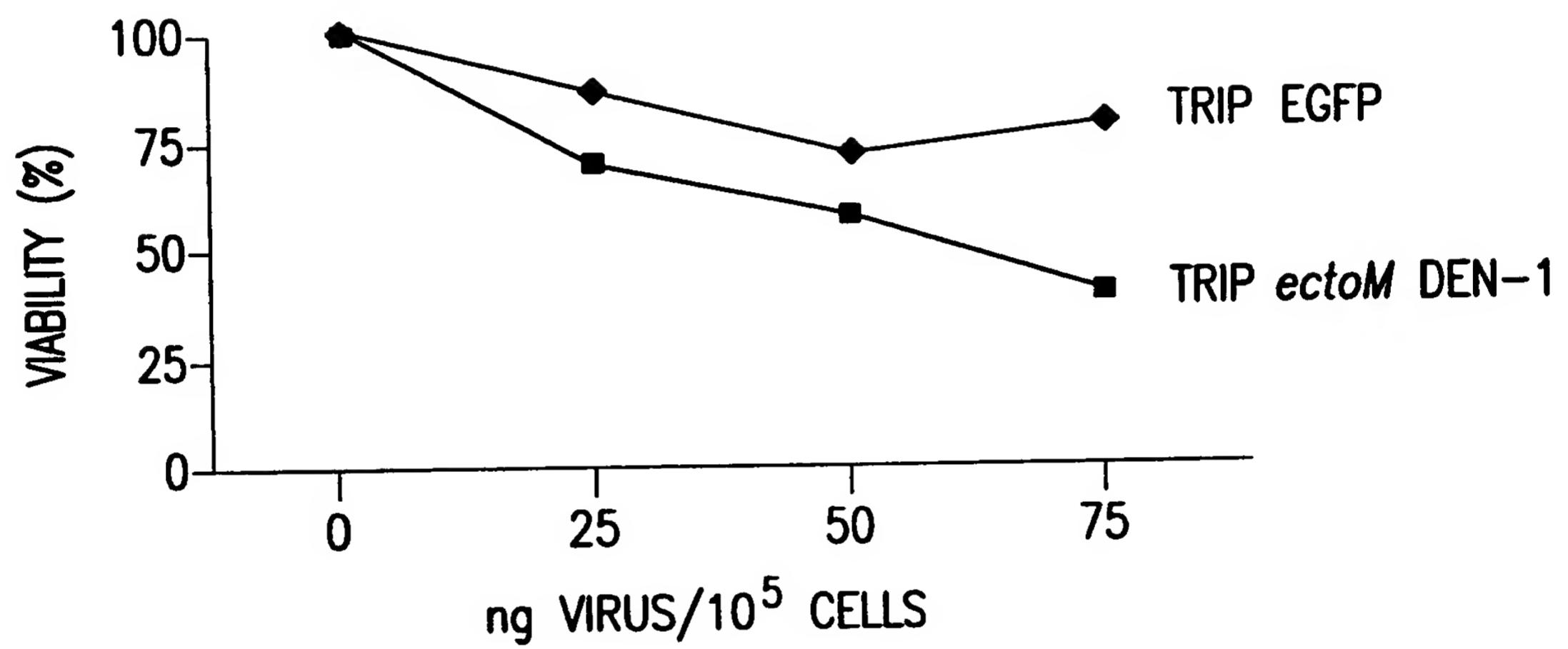


FIG.14

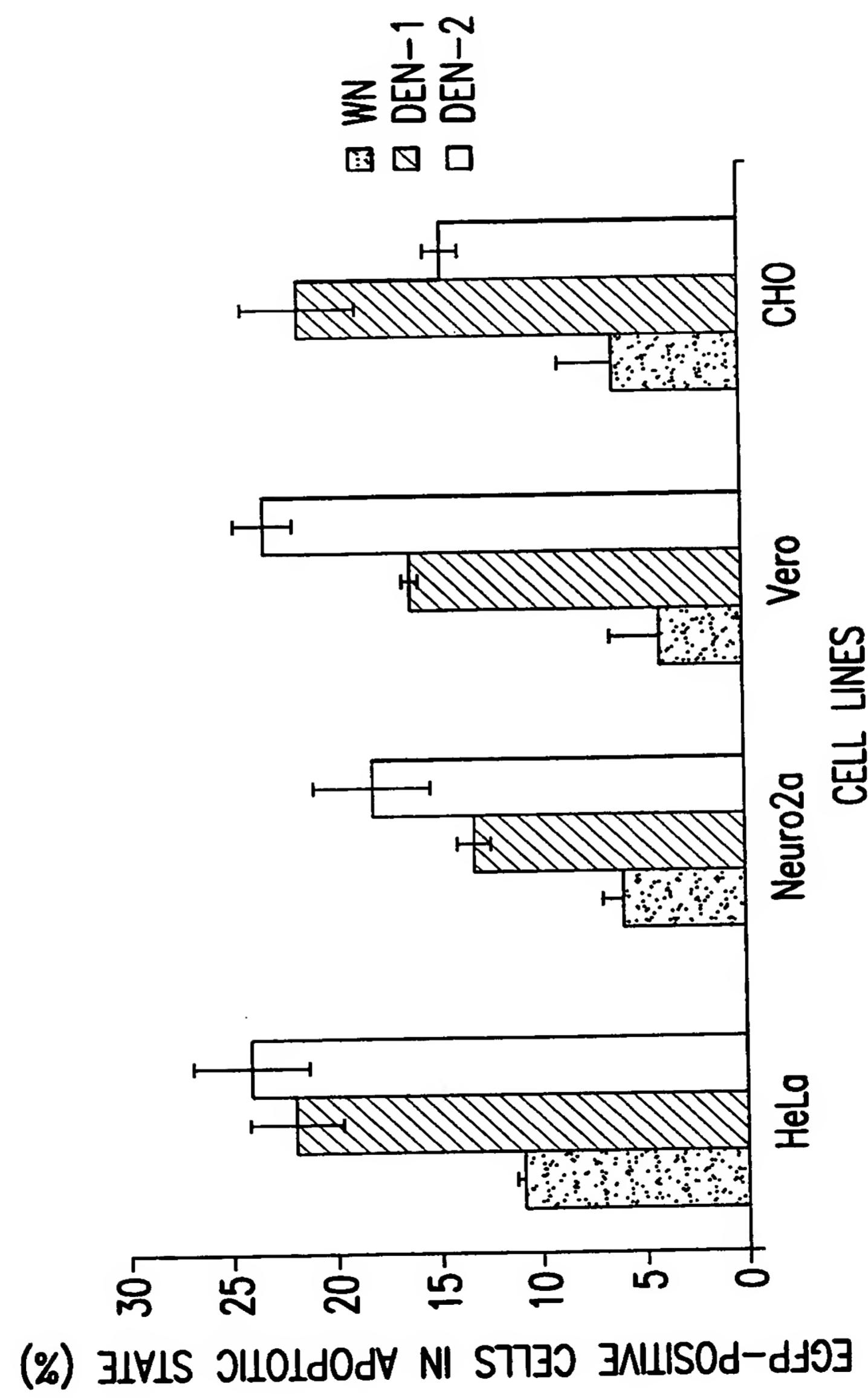


FIG. 15